

RECEIVED
CENTRAL FAX CENTER

SEP 06 2006

Serial No. 10/625,098
Page 2 of 11

IN THE CLAIMS

1. (currently amended) A laser transmitting/receiving system for target practice including a laser transmitter and a laser receiver, wherein
 said laser transmitter having a modulator for modulating a transmitting laser signal by position information of said laser transmitter and time information and
 said laser receiver having an information extractor for extracting said time and position information from a received laser signal, a memory to store geographical features information and a judgment unit for judging a shot effect using the extracted time and position information and the geographical features information corresponding to a position of said laser receiver.
2. (previously presented) A laser transmitting/receiving system for target practice as set forth in claim 1, wherein said laser transmitter transmits said modulated laser signal in response to a signal from a shooting apparatus of a weapon.
3. (previously presented) A laser transmitting/receiving system for target practice as set forth in claim 1, wherein the position information of said laser transmitter is the position information output from a shooting side position finder of said laser transmitter.
4. (previously presented) A laser transmitting/receiving system for target practice as set forth in claim 1, wherein said position information is the most recent position information in a continuously recorded position information and said time information corresponds to said most recent position information.

84159360_1

5. - 9. (canceled)

10. (currently amended) An apparatus for target practice comprising:

a memory to store geographical features information; and

a judgment unit for judging a shot effect using time and position information extracted from a received laser signal, and the geographical features information stored in the memory.

11. (currently amended) An apparatus for target practice comprising:

a memory to store geographical features information; and

a judgment unit for judging a shot effect in accordance with a distance obtained from position information extracted from a laser signal received by a receiver, ~~and position~~ information of the receiver, ~~and a time difference obtained from time information extracted from the received laser signal, and time information of the receiver.~~ and the geographical features information stored in the memory.

12. (currently amended) An apparatus for target practice comprising:

a memory to store geographical features information;

a munition type parameter recorder for recording munition type parameters for each shot munition type; and

a judgment unit for judging a shot effect by using time and position information extracted from a signal received by a receiver, the munition type parameters in accordance with a shot

Serial No. 10/625,098

Page 4 of 11

munition type information extracted from said received signal, and time and position information of the receiver, and the geographical features information stored in the memory.

13. (currently amended) A controller for transmitting time and position information to a laser transmitter having a modulator for modulating a transmitting laser signal by the time and position information, comprising:

a memory to store geographical features information.

wherein in response to a signal from a shooting apparatus of a weapon, time and position information, and the geographical features information stored in the memory isare transmitted to said laser transmitter, said position information being position information of said modulator and said time information being time information of said position information.

14. – 34. (canceled)

35. (previously presented) A laser transmitting/receiving system for target practice as set forth in claim 1, wherein said laser transmitter is a shooting side apparatus receiving a shot trigger signal from a shooting apparatus of a weapon and transmitting said laser signal in the shot direction; and said shooting side apparatus is provided with a shooting side position finder for generating said position information and a shooting side recording apparatus for continuously recording the position information output from said shooting side position finder and is designed to transmit not only an ID number of said shooting side apparatus, shot weapon type information, and shot munition type information, but also the position information of said shooting side

84159360_1

Serial No. 10/625,098

Page 5 of 11

apparatus output from said shooting side position finder included in said laser signal in response to receipt of a shot trigger signal from the shooting apparatus of the weapon.

36. (previously presented) A laser transmitting/receiving system for target practice as set forth in claim 35, wherein said shooting side position finder also generates the time information of the time said shooting side position finder generated said position information, said shooting side recording apparatus also continuously records the time information output from said shooting side position finder, and said transmitter transmits not only the position information of said shooting side apparatus, but also said time information output from said shooting side position finder included in said laser signal in response to receipt of a shot trigger signal from the shooting apparatus of the weapon.

37. (previously presented) A laser transmitting/receiving system for target practice as set forth in claim 1, wherein said laser receiver is a target side apparatus for receiving a laser signal from said laser transmitter and judging the shot effect; said target side apparatus is provided with a target side position finder for generating position information of said target side apparatus, a target side recording apparatus for continuously recording position information output from said target side position finder, and a munition type parameter recorder for recording munition type parameters necessary for calculation of a hit risk range for each shot munition type and uses the position information of said target side apparatus obtained from said target side position finder when receiving a laser signal transmitted by said shooting side apparatus, shot weapon type information included in the laser signal transmitted by said shooting side apparatus obtained from said parameter recorder, and munition type parameters including the velocity of the shot

841592360_1

Serial No. 10/625,098

Page 6 of 11

munition recorded for each shot munition type information, the plurality of ranges of tracking of a target by a shot munition set for the different states of damage, and the effective time or effective range of the shot munition to calculate and record the hit risk range by a coordinate range of a 3D reference system and compares the recorded hit risk range and position of said target side apparatus obtained from said target side position finder so as to judge the shot effect.

38. (previously presented) A laser transmitting/receiving system for target practice as set forth in claim 37, wherein said target side position finder also generates the time information of the time of generation of the position information, said target side recording apparatus also records said time information output from said target side position finder, said hit risk range is calculated and recorded for each predetermined elapsed time from a shot, and said shot effect is judged for every predetermined elapsed time from a shot.

39. (previously presented) A laser transmitting/receiving system for target practice as set forth in claim 38, wherein said shooting side apparatus is further provided with a terrain recorder for recording coordinate ranges of the 3D reference system of terrain-based safe regions, calculates and records a shot heading based on position information of said target side apparatus obtained from said target side position finder for each elapse of a predetermined time from receiving a laser signal transmitted from said shooting side apparatus and position information of said shooting side apparatus obtained from the laser signal transmitted by said shooting side apparatus, and compares the coordinate ranges of the 3D reference system of the terrain-based safe regions recorded by said terrain recorder for each heading at which said target side

84159360_1

Serial No. 10/625,098

Page 7 of 11

apparatus is shot and the position of said target side apparatus obtained from said target side position finder so as to judge the shot effect.

40. (previously presented) An apparatus as set forth in claim 10, wherein said apparatus is a target side apparatus for receiving the laser signal from a laser transmitter and judging the shot effect; said target side apparatus is provided with a target side position finder for generating position information of said target side apparatus, a target side recording apparatus for continuously recording position information output from said target side position finder, and a munition type parameter recorder for recording munition type parameters necessary for calculation of a hit risk range for each shot munition type and uses the position information of said target side apparatus obtained from said target side position finder when receiving said laser signal, shot weapon type information included in said laser signal obtained from said parameter recorder, and munition type parameters including the velocity of the shot munition recorded for each shot munition type information, the plurality of ranges of tracking of a target by a shot munition set for the different states of damage, and the effective time or effective range of the shot munition to calculate and record the hit risk range by a coordinate range of a 3D reference system and compares the recorded hit risk range and position of said target side apparatus obtained from said target side position finder so as to judge the shot effect.

41. (previously presented) An apparatus as set forth in claim 40, wherein said target side position finder also generates the time information of the time of generation of the position information, said target side recording apparatus also records said time information output from said target side position finder, said hit risk range is calculated and recorded for each

84159360_1

Serial No. 10/625,098

Page 8 of 11

predetermined elapsed time from a shot, and said shot effect is judged for every predetermined elapsed time from a shot.

42. (previously presented) An apparatus as set forth in claim 40, wherein said target side apparatus is further provided with a damage simulator including a plurality of smoke generators of different amounts of smoke for simulating damage when the results of judgment of the shot effect are output and one of said smoke generators is selected in accordance with the results of judgment of the shot effect so as to change the amount of smoke to simulate the damage.

84159360_1